

NOTES ON GEOGRAPHIC DISTRIBUTION

Lepidoptera, Nymphalidae, Ithomiinae, *Scada reckia reckia*: Suggestion of recent range expansion throughout the state of Espírito Santo, SE Brazil.

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The butterfly *Scada reckia reckia* (Hübner [1808]) is a small black and yellow Ithomiinae that occurs in most forested habitats near the Northeastern Brazilian coast (Brown 1979). Historically, this taxon has been observed in rain forests and semi-deciduous forests from the states of Paraíba to South Bahia (Fox 1967; Brown 1979), and this is a relatively common ithomiine species in most forests of the states of Alagoas, Pernambuco, and Paraíba (see Cardoso 1949; Kesselring and Ebert 1979; Freitas and Brown 2005). During more than 50 years of field observations, no populations were registered South of Itamaraju, South Bahia (16°57' S; 39°33' W) (Brown 1979), and no individuals of this species were recorded in the state of Espírito Santo (Brown 1979; Brown and Freitas 2000; and unpublished results).

After 1990, two new distributional records expanded the occurrence of this species through the state of Espírito Santo. In July 1992, two individuals of *S. r. reckia* were collected from the *Reserva Florestal da Vale do Rio Doce* (CVRD), Linhares, Northern Espírito Santo (19°8' S, 39°58' W) by AVL. The species was observed again in the same site in August 1995 and in July 1996 by KSB. The CVRD was extensively sampled by KSB in the end of the 1980's, and even after producing a list of about 500 species of butterflies, no individuals of *S. r. reckia* were recorded in the reserve in those years. The second new distribution record came in May 2006, when a single specimen was observed and photographed in the forested area of the *Museu de Biologia Prof.*

Mello Leitão, in Santa Teresa, Espírito Santo (19°56' S, 40°36' W) by JZC and TAN. The entire region of Santa Teresa was also extensively sampled over the past 30 years by many collectors (Brown and Freitas 2000), with no records of this species.

These new records of *S. r. reckia* are especially relevant considering the long history of extensive sampling in the state of Espírito Santo, including the two places above mentioned. Additionally, several sites in Espírito Santo extensively sampled north of Santa Teresa (including Linhares, as mentioned above) yielded in no records of *S. r. reckia* in the past four decades. For example, the species was not recorded in the region of Pedro Canário (Brown and D'Almeida 1970) neither in Baixo Guandu (Brown and Benson 1974) in the extensive samplings of KSB and collaborators about 30 years ago.

The reasons that explain this apparent recent distribution expansion are still unknown and deserve further investigation. Also, new censuses should be done in areas north of Santa Teresa and Linhares to check whether the species has become present in other sites where it was absent before. The suggestion of a possible expansion of geographic range is a relevant topic, since it could be related with habitat alteration (see discussion in Brown and D'Almeida 1970), and could in fact be followed by local extinctions or habitat expansion not yet observed for several species of animals and plants in Espírito Santo and South Bahia.

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Acknowledgements

The authors thank Carla Penz for reviewing the manuscript. Financial support was provided by FAPESP (grants #00/01484-1 and #04/05269-9), the BIOTA-FAPESP program (grant #98/05101-8), the *Fundo de Apoio ao Ensino à Pesquisa e à Extensão* (PAPDIC grant #1659/04), the CNPq (fellowship #300315/2005-8), and the National Science Foundation (DEB grant #0527441, #0639861).

Literature cited

- Brown Jr., K. S. 1979. *Ecologia Geográfica e Evolução nas Florestas Neotropicais*. Campinas: Universidade Estadual de Campinas. xxxi + 385 p.
- Brown Jr., K. S. and R. F. D'Almeida. 1970. The Ithomiinae of Brazil (Lepidoptera: Nymphalidae). II. A new genus and species of Ithomiinae with comments on the tribe Dircennini D'Almeida. *Transactions of the American Entomological Society* 96: 1-18.
- Brown Jr., K. S. and W. W. Benson. 1974. Adaptive polymorphism associated with multiple Mullerian mimicry in *Heliconius numata* (Lepid. Nymph.). *Biotropica* 6(4): 205-228.
- Brown Jr., K. S. and A. V. L. Freitas. 2000. Diversidade de Lepidoptera em Santa Teresa, Espírito Santo. *Boletim do Museu de Biologia Mello Leitão (Nova Série)* 11/12: 71-116.
- Cardoso, A. S. 1949. Lepidópteros de Alagoas. *Revista de Entomologia* 20(1/3): 427-436.
- Fox, R. M., 1967. A monograph of the Ithomiidae (Lepidoptera). Part III. The tribe Mechanitini Fox. *Memoirs of the American Entomological Society* 22: 1-190.
- Freitas, A. V. L. and K. S. Brown Jr. 2005. Immature stages of *Napeogenes sulphurina* Bates, 1862 (Lepidoptera, Nymphalidae, Ithomiinae) from Northeastern Brazil. *Journal of the Lepidopterists' Society* 59(1): 35-37.
- Kesselring, J. and H. Ebert. 1982. Relação das borboletas encontradas na "Mata do Buraquinho", João Pessoa, Estado da Paraíba, Brasil. *Revista Nordestina de Biologia* 2(1/2): 105-118.

Received March 2008

Accepted May 2008

Published online May 2008